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CABS, CARS, AND QUARRELS.

We cannot help regarding it as a misfortune, that any legislative interference with *price* should be deemed necessary. All the wisdom of all the legislatures that ever acted can never determine the proper price of a commodity; for this must depend upon the number and eagerness of those who want to get it, contrasted with the number and industry of those who are prepared to supply it. This principle is becoming more and more recognised every year; the exceptional cases must be regarded as the remnants of a more antiquated law. One of the last exceptions was the assize on bread, abolished in 1836; it was a statutory regulation, by which the price of bread sold in the metropolis was regulated by the corporate authorities. The hackney-carriages in the metropolis are still among the exceptions. There are two circumstances which may perhaps be adduced as giving support to this system—financial and police. The Chancellor of the Exchequer chooses to say, and the parliament chooses to let him so say, that whenever a ride is taken in a hackney vehicle in the London streets, a part of the profit shall come into his official strong-box: this he exacts by means of a licence; and this interference may perhaps afford a sort of reason for interfering in price or fares also. At the same time, the London streets being almost overwhelmed with traffic of various kinds, there may be an opinion, or may have been an opinion in past times, that if unlimited competition in cabs and coaches were permitted, the streets might become impassably choked with vehicles; and that Her Majesty's subjects might find their persons or their purses, or both, endangered. This police motive we believe to be the stronger of the two, in leading to the fixation by law of the fares chargeable; for in all large towns the public vehicles necessarily engage a portion of the attention of those who have control over the well-ordering of the streets. In order to see how far this prevails on the continent, we have looked into the red books which Mr Murray pours forth for use in every corner of Europe; and the following are the results—referring only, it must be borne in mind, to hackney vehicles, and only to the traffic within large cities.

At Berlin, there are droschkies (a kind of open hackney-coach) which ply for hire in the principal streets. To drive from one part of the city to another involves a charge of 5 silbergroschen for 1 or 2 persons, and 7½ for 3 or 4; but if by the hour, 15 or 17½, according to the number of persons. These several charges are about equal to 6d., 9d., 1s. 6d., and 1s. 9d., respectively. The driver gives to every person a printed

ticket, bearing his number and the day of the month. At Copenhagen, the droski (a similar vehicle, but with the name spelled differently) is charged 1½ marks (about 7d.) for a ride of any distance within the city, or 3 marks for passengers and luggage from the hotels to the steam-boats and railway. At St Petersburg, the droschky-fare is about 1s. for any distance, the limits of that city being very wide; but the vehicle 'is a most comfortless conveyance, consisting merely of a bench upon four wheels, on which the fare sits astride as on a velocipede, and immediately behind the driver, who is not an agreeable person to be in close contact with—at anyrate to those who are not fond of the odours of garlic.' At Brussels, there are *fiacres* and *vigilantes*; the former is charged 1½ francs for a drive within the town, or 2 francs for an hour; the charge for the *vigilante* is half a franc less. At Amsterdam, the town vehicle may be considered to be the *trekschuit*, or drag-boat, on the innumerable canals—very cheap, very slow, and very dull; but somehow they suit the Dutchmen tolerably well. In Paris, there are *calèches*, *coupés*, *fiacres*, *cabriolets*, and *berlines*—a much greater variety than we have in London, exhibiting variations in charge, number of horses, number of passengers, and speed. They vary from 22 to 40 sous (11d. to 1s. 8d.) for a journey of any distance within Paris, and from 30 to 50 sous (1s. 3d. to 2s. 1d.) per hour; the charges are much higher after midnight. The ordinary Paris cabriolet charge is 22 sous (11d.) for a drive. At Vienna, there are *fiacres* which are numbered, but the fares of which are not determined by law; the charge is generally a *zwanziger* (8d.) from any one part of the city to another. At Rome, the *vettura*, or open *calèche* with a hood, occupies stands in some of the principal streets analogous to the London cab-stand: the fare for half an hour is 2 to 3 pauls, or 4 pauls for four persons; or 4 pauls by the hour (a paul is about 5d.). At Milan, there are hackney-carriages which have no fixed charge, but which are generally paid for at about 2 francs per hour. At Leghorn, the charge is a little less—3 pauli, or 1s. 4d. per hour.

It thus appears, that in most of the chief continental cities there is a definite charge for a single journey, of whatever length, within the city; that this charge is determined for the owners, and not by them; and that it varies from about 6d. English to 1s. 3d. If we take for our authority the time-bills of the various English railway companies, we can gather the following details in reference to some of our great towns:—At Birmingham, there are cabs, single-horse coaches, and pair-horse coaches; a pair-horse coach is charged one-third more than a one-horse coach, and twice as much as a cab; but if a pair-horse coach does not go further

than a mile, the fare is limited to 1s.; each kind is licensed for a particular number of persons, and 50 per cent. higher fare is charged if more than that number be carried: the smallest cab-fare is 9d.; and from this it mounts, by stages of 3d. each, to 3s. and upwards. At Manchester, there are coaches and cars; the single-horse cars are charged 6d. per mile after the first, but any distance within one mile is 1s.; the pair-horse coaches are about 6d. per journey higher than the cars: after midnight, the fares are doubled. At Hull, there are cabs or cars at about 1s. a mile. At Liverpool, the cabs differ from those at Birmingham in these two points—that the minimum is 8d. instead of 9d., and that the successive steps in advance are 4d. instead of 3d. At Bristol, the charge is higher, there being no fare below 1s., thence rising at the rate of about 8d. per mile, with an addition if a fourth passenger be carried. At Bath, the coach minimum is 2s., and the fly minimum 1s. Cheltenham is a shade higher than Bath, and Oxford a shade higher than Cheltenham. Plymouth is cheap—8d. per mile.

In endeavouring to illustrate the London system by that of Dublin, we are at once struck with the wide difference in the vehicles. A Dublin car is a thing by itself, an original, a stroke of genius—a one-sided, careless, go-ahead, rattle-trap sort of production. The passenger sits sideways, and so does the Jarvey, there being two seats directly over the two wheels, on each side of what we may deem the backbone of the carriage. How Jarvey contrives by twisting himself round at an angle of forty-five degrees, to hold the reins and larrup the horse without tumbling off, is a perfect marvel; and the passenger himself, especially if fresh from England, has to learn to accommodate himself to this one-sided mode of progressing through life. However, with all their oddities, these cars are most useful vehicles, and are used by the Dublin people far more extensively, in reference to the amount of population, than cabs are patronised by the Londoners. There is one most sufficient reason for this—the cheapness. Not only can you travel at 6d. per mile, but the charge is only 6d. from any one part of Dublin to any other part; and some of these distances exceed three miles. These extreme distances are of course only exceptional, the majority of the journeys being short, and the passengers generally either one or two in number. We believe, too, that the sixpenny regulation is of recent date; the fares having been higher a few years ago.

The car-system of Ireland is in every respect remarkable, whether in or out of Dublin. It does not come within the scope of the present article to treat on this subject, otherwise than in connection with the hackney-traffic of cities and towns; but we will say a few words concerning it *en passant*. In the twelfth volume of the Journal—the last of the old series—an account was given of Mr Bianconi's car-establishment, as it existed in 1843; and having been favoured with some very recent information, we will now give a picture of it as it exists in the middle of 1853. The number of vehicles now belonging to that important establishment is 130; the horses are 1250; the persons employed are 1500; and the number of booking-offices or car-agencies in various parts of Ireland is 135, besides mere stations or stables for changing horses in the country districts. The extreme termini or borders of the region served by these cars are Donegal in the north, Cork in the south, Waterford in the east, and Achill in the west. The coaches and cars—for there are two or three kinds—traverse twenty counties out of thirty-two. The horses consume annually 30,000 barrels of oats, and 3500 tons of hay. Mr Bianconi builds all his own cars, for which purpose he has a very complete factory at Clonmel. Thus has this remarkable man, with nothing to back him but his own skill and energy, realised a handsome fortune, won the affection of those

more immediately connected with him, and effected an incalculable amount of good in Ireland generally.

But *revenons à nos moutons*—our moutons being, at present, the London cabs. The few details we have given concerning provincial towns and foreign cities suffice to shew that there is a general tendency to regulate by authority the charges made for hackney-conveyance. This tendency has been quite as strong in London. It was in 1634 that Captain Bailly, transferring his attention from the sea to the land, set up four hackney-coaches, put the drivers in livery, and established a stand for them near the May-pole in the Strand; and the novelty took so prodigiously, that the number increased largely and rapidly. Kings and courtiers were jealous of this luxury-for-the-people; and proclamations were repeatedly issued to put down the hackney-coaches—but in vain. As the government could not put them down, they resolved to get a little profit out of them by licensing the coaches and drivers. By 1768, the number had reached a thousand. The coaches with two seats carried four persons—or six on a stretch; the chariots with one seat carried only two, but each alike was drawn by two horses. The Parisian one-horse cabriolet was introduced in 1823, and, after a hard fight, drove the two-horse coach completely of the field. In 1832, a new act of parliament removed all restrictions on the number of hackney vehicles, any man being permitted to set up a cab who chose to pay for a licence. The cabs themselves underwent some changes. At first, the driver sat by the side of his box, in an open vehicle; then a little seat was made for him over the right wheel, leaving room for two passengers; then was introduced a cab somewhat resembling a *fiat* cut from an omnibus, with a door at the back; then the four-wheel cab, with doors at the side; and then the 'hansom,' with its large wheels, good horse, dashing pace, and driver who seems every moment on the point of throwing a somersault over his cab.

London, as our readers are well aware, was lately undergoing a cab-insurrection. Long before this paper reaches the hand of the reader, the insurgents may have laid down their arms, or the legislature may in part have surrendered. Whatever may be the result, we think that in either case there is a question or two well deserving the attention of public men. The quarrel is, as everybody knows, that the cab-people like to do everything they like, when they like, and how they like; whereas the legislature likes that the likes of the cabmen should be subordinate to its likes. The act passed in 1831 contains the most minute details: the cabman appears to be bound hand and foot; he must do this; he must not do that; so it goes all throughout seventy-seven clauses, as if he were a public enemy, against whom 400 peers and 658 commoners had vowed eternal war. By this act, the rates were settled at 1s. a mile for two-horse coaches, and 8d. per mile for cabs; 2s. per hour for coaches, and 1s. 4d. per hour for cabs. A few minor changes have been made by subsequent acts, but the regulations have remained substantially as then established. According to a statement made in one of the London newspapers, the present extent of the cab-system is—or was just before the strike—as follows:—There are 3623 cabs, of which about 80 are 'hansoms'; taking the gross earnings at 14s. per day each—say, 10s. 6d. for the owner and 3s. 6d. for the driver—this would considerably exceed L.800,000 per annum. This differs from the general estimate, which gives a lesser number of cabs, but a greater average receipt by each: 3000 at 17s. per day, would yield as much as 3623 at 14s.; so that the L.800,000 per annum may be applicable under either estimate.

To detail the particulars of the new act is unnecessary—newspaper readers know them well enough. A larger question is: Does there appear an absolute necessity for parliament to interfere in these peddling

matters Russo-Twelve room, it and how matters authori duct of ciple of rights in fares by wrangle ducted would b simple r by whos our brea better b and then vehicles ing conf to-morro with liv low rate arrangen quarrels. cabmen of memi sion. T this shou which th would le velling w after a li Ireland; bially an true that the hack Mr Bianc but this employe by the lo that thei wages, c and good cabmen a able posi the publi look for These mediate do not s any part concern cab-ride path plu necessary [Note: taken by quite cle false and public— any sort but rath tion, tha tions wh * It may to make being mact em. It se being only that all m at Weter their own this ming council of the under

matters? While governments are anxious about Russo-Turkish affairs, and Mr Speaker is sitting twelve hours a day listening to dull speeches in a hot room, it certainly appears anomalous that the prices and hours and badges of cab-drivers should be made matters of minute legislation.* Supposing the police authorities to keep a sharp eye over the orderly conduct of the drivers, we have faith enough in the principle of competition to believe that it would set things to rights in the end: there is no legislative settlement of fares by omnibus, and yet we have now fewer omnibus-wranglers than cab-wranglers in London. A well-conducted driver, with a clean cab and a good horse, would beat a ruffian in fair open competition; for this simple reason, that the public soon discover where and by whom they are best served. We should not get our bread or beef, our hats or boots, either cheaper or better by having the price regulated by parliament; and there seems to us no cogent reason why hackney vehicles should be an exception. We have unhesitating confidence, that if cab-legislation were abolished to-morrow, cab-companies would soon be established, with liveried drivers, efficient control, good service, low rates, definite charges, and a number of minor arrangements to lessen the probability of disputes and quarrels. As matters now stand, the public and the cabmen seem to regard each other almost in the light of enemies, to be circumvented on every possible occasion. There is no commercial reason whatever why this should be the case: the one is willing to buy services which the other is willing to sell; and if parliament would let them alone, we think that free trade in travelling would settle rates and fares pretty satisfactorily after a little time. Mr Bianconi has settled all this in Ireland; his fares are low, and his drivers are proverbially and almost universally well conducted. It is true that the stage-system in the country differs from the hackney-system in towns, and that the analogy for Mr Bianconi's experience should not be carried too far; but this experience is valuable, as shewing what a good employer can do, without any codling or protecting by the legislature. Railway companies have shewn that their porters and policemen, at anything but high wages, can be organised to a thorough state of civility and good conduct; and we see no reason whatever why cabmen should not be able to rise above the unfavourable position which they now hold in the estimation of the public; but it is not to acts of parliament that we look for the attainment of this end.

These few observations we have offered without immediate reference to the present subject of quarrel; we do not attach importance to any particular clause in any particular act; nor can we venture on a guess concerning the probable tendency of cab-drivers or cab-riders to be satisfied with this or that statute. Our path plunges deeper. We want to know—Is cab-law necessary at all?

[Note.—We see much to approve of in the view taken by the writer of this article. It has long been quite clear to us, that there is something profoundly false and wrong in the relation of street vehicles to the public—the employed party being apparently without any sort of motive to treat the employing party well, but rather the contrary. It seems a plausible suggestion, that this falsity of relation lies in the regulations which trammel the trade, causing the proprietors

and conductors of vehicles to band together in a sense of common wrong against the public, instead of competing with each other, as other trades-people do, for the smiles of the public; and doubtless also preventing a more respectable class of men from coming into the trade. Dismiss these regulations entirely, and cabmen would be thrown into competition with each other—one company of particular livery striving with another of different livery, to give the best accommodation at the lowest possible price, and with the greatest possible civility. The plan is at least worth trying, as certainly no imaginable consequences of it could exceed in disagreeableness the present system, under which you enter a cab as you would some haunt of the lowest of mankind, where you knew that you could scarcely escape either defilement or spoliation.—Ed.]

COUSIN LETTY.

'Is this the *Highflyer*?' asked a lady, making her way amongst a knot of idle gazers who surrounded the coach which ran every day between Carlisle and Whitehaven.

'Yes, ma'am; just going to start,' said the coachman. The economy of the proprietors did not afford a guard.

'I'm afraid you've no room for me,' observed the lady, looking at the pyramid of luggage and the crowd of passengers already seated.

'Plenty of room, ma'am, inside: we'll take care of your luggage, ma'am; and her two portmanteaus were stowed away in those mysterious little corner cupboard-like places ycleped the front and back boot. But her half-dozen bandboxes! those ladies' companions, requiring the mildest treatment.

'What are we to do with the bandboxes?' shouted the hostler, as they all came tumbling down from the roof on the first movement of the coach.

'Well done, stupid!' growled the coachman, checking his fine start. 'Why didn't you tie 'em on? Get a bit of twine, and sling 'em over the sides.'

'Are my bandboxes safe?' anxiously inquired the proprietrix of those receptacles of caps and bonnets, popping out her head. The now tightly-tied articles, answered for themselves, by bobbing and dangling over her upturned vision.

'I'm afraid, ma'am,' observed the remarkably fat gentleman who sat next to her, 'if there's an upset, your bandboxes will have a bad chance.'

'Is there any danger then, sir, of the coach upsetting?'

'I shouldn't have given you the corner, and suffocated myself in this middle seat—there were six inside—' if I hadn't thought so,' said the gallant fat man. 'I'm an old traveller, ma'am, and know which is the safest place.'

'Dear me, it's very alarming!' said a prim thin old maid, who guarded him on the right. 'Coachman! is there any danger?'

'Yes, ma'am, of your catching the toothache if you don't keep your head in,' said the vulgarly facetious fellow, as he pulled up to take an unlicensed thirteenth passenger at the toll-bar.

'Coachman!' said a wizzened, cross-looking little attorney, occupying the third corner of the inside, 'you've already your number—twelve out, six in, with an unlimited quantity of luggage. I shall lay an information.'

In truth, the coach was most alarmingly top-heavy; and the four smoking horses had some difficulty in pulling it up a steep hill which they were ascending. 'If she backs,' said the remarkably fat gentleman, as if

* It may be questioned, why should parliament be called upon to make regulations for street vehicles in London at all, these being matters which in other towns are settled by the municipalities. It seems to be a consequence of the city-council of London being only applicable to about a tenth part of the entire metropolis, that all matters affecting the whole of London have to be adjusted at Westminster. The other cities of the realm, which manage their own affairs by local councils, have a right to complain of this misapplication of the powers and attention of the great council of the nation, which all have a share in supporting, on the understanding that it exists for national objects only.

he delighted in frightening the ladies, 'it's all over with us.'

'Oh!' exclaimed an affected young miss in the fourth corner, strangely reversing her little knowledge of travelling: 'why don't they lock the wheels? Coachman, put the drag on!'

The coach, however, arrived safely at the top of the hill. 'Look to your wheel!' said a foot-passenger, as he walked on his road, with his bundle over his shoulder. The careless driver took no heed.

'Wilt thou let me speak to the coachman?' asked a comely-looking Quakeress—the fat gentleman's *vis-à-vis*—stretching her head out of the window. 'Coachman, thou shalt drive me no further: thou must set me down!'

'I'll set you down, ma'am,' said the coachman, lashing his horses into a gallop down the hill.

The coach gave a lurch, and righted itself—'Going!' said the fat gentleman; another, and again recovered its equilibrium—'Going!' a third—'Gone!' The wheel came off, and over went the coach with its fearful load into the ditch.

What a scene then presented itself! One gentleman was thrown off the roof, and seated—not very comfortably—on the top of a quickset-hedge. A young infant had been jerked out of its mother's arms, and lay unhurt and uncomplaining far up in the ditch. But even in this distressing disaster, where, fortunately, there seemed to be more fractured bonnets than bones, the ludicrous seemed to prevail, by the fat gentleman making two or three abortive attempts to squeeze himself out of the window—the door, as usual on all such occasions, being difficult, and almost impossible to open. The ladies and the little attorney, all of moderate dimensions, were easily extricated; but 'the man of flesh,' now properly punished for his selfishness, was left last. He had forced himself so far through the window, that he could go no further—thus unable to advance or recede, when the door was at length opened, never did mortal cut so ludicrous a figure! The difficulty not a bit obviated, there he was, moving diagonally with the door, wedged into the window like a huge thread stuck fast in a small-eyed needle, or tied by the middle like the Golden Fleece! The coachman, who knew him well for one of the stingiest travellers on the road, took his own time in extricating him, consoling him in the meanwhile with the pleasing intelligence, that his most particular packages were completely smashed. The fat traveller, who generally laughed at other people's misfortunes, had now little sympathy extended to him, as he launched forth a volley of invectives against the coachman, heightened perhaps by the smart twinges of a broken rib. The ladies had escaped unhurt, with the exception of the owner of the bandboxes, whose shoulder was severely bruised; fortunately, a surgeon, who happened to have been on the roof, was there to render assistance. To add to the discomfort of the upset, the rain began to pour; and the only alternative was for all the passengers to walk to a cottage some hundred yards off, and wait until chaises were sent for from the next stage. This afforded Mr Leslie, the surgeon, an opportunity of attending promptly to the injured lady—the kind, comely Quakeress bathing the arm with vinegar before the surgeon carefully bandaged it. The prim old maid, however, who was by, thought the hurt far too trifling to warrant the exposure of the fair plump shoulder to any surgeon. Four chaises arrived, and intelligence that a coach would be ready at the next stage to take the passengers to their journey's end.—Into, and on, and all round about these four chaises, were packed the passengers and their luggage. Mr Leslie contrived that himself, the Quakeress, and his new patient, should be the sole occupiers of one of the vehicles—a luxury under the circumstances.

'Where are my bandboxes?' inquired the proprietrix

thereof, forgetting her pain in her apparently ruling passion.

'Here they are, ma'am, quite safe; I took care of that,' said the unfeeling Jehu, presenting six flattened little articles, looking like blue pancakes. 'They've been knocked down to you, ma'am, at the upset price. Remember the coachman, ma'am.'

'Don't be impertinent, sir,' said the surgeon, 'or we may remember you in a way that may force you to refund your perquisites for the last twelvemonth, to repair the damages of this day's carelessness.'

Mr Leslie now discovered that his patient was going to Chestnut-tree Cottage, just in the suburbs of the town where he resided, and that the Quakeress was to be set down a few doors from his own house; so finding their destinations alike, and their little party very agreeable, they resolved to forsake the *Highflyer*, and complete the journey, only some fifteen miles further, per chaise.

A pleasant acquaintance sprang up during those fifteen miles; the Quakeress on alighting saying in her own simple phraseology: 'I will call to ask after thee at Chestnut-tree Cottage;' and Chestnut-tree Cottage promising to return the compliment, by dropping in at Jonathan Stevens, hosier.

The chaise now entered the pretty avenue, shaded by trees in full leaf, where, almost smothered in roses and woodbine, was situated Chestnut-tree Cottage. Two or three curly-headed little urchins, who were wheeling their miniature wagons and barrows round the garden, on hearing the rumble of the chaise, made a short cut over the mignonette and verberna beds to the garden-gate. 'Hurrah! hurrah! Cousin Letty! Cousin Letty!' shouted the children, clapping their hands in an ecstasy of delight as the chaise stopped, and Chestnut-tree Cottage poured forth all its inmates to welcome Cousin Letty. What a profusion of questions then ensued. 'How are you, Cousin Letty?' 'What's the matter, Cousin Letty?' 'Have you brought me a new drum?' 'And me my magic-lantern?' and, above all, the 'Ricketty-ticks and saw-lights for the king's birthday?' Poor Cousin Letty; she seemed like a goodly city about to be sacked. The surprise of the family, however, on finding she was accompanied by Mr Leslie—for he had insisted on seeing her in safety to the cottage—caused some cessation to the confusion of tongues. The details of the coach accident interested every one; and Mr Leslie, promising to call on the following day, and hoping that the bruise would prove but a slight annoyance, took a cordial leave of Cousin Letty.

And now, gentle reader, we must have courage, and confess a truth, which will be sympathised with according to thine own age and condition: Cousin Letty was thirty-five, and unmarried; but then she was such a cosy-looking woman, neither too tall nor too short, not too stout nor too slim—with a beaming, plump, contented face—that people at a venture always addressed her as *Mrs*, never deeming that such a desirable, comfortable sort of person should have been overlooked by the men, who are generally selfish enough to appropriate to themselves all that is worth having: but so it was; and Cousin Letty, who, moreover, had money, the interest of which brought her in £400 a year, seemed destined to lead a life of single blessedness.

She had now come on her annual visit to her only relation, her cousin, John Middleton, who with his wife and family were residing for the summer months at Chestnut-tree Cottage, on the coast of Cumberland. Mr Middleton had a very charming daughter of nineteen, Mary Middleton—an especial favourite of Cousin Letty, to whom it was supposed she would leave her money—and quite a regiment of infantry. Mrs Middleton was an easy, good-hearted wife and mother; and the whole establishment went on in a very nice, noisy, natural sort of a manner. Cousin Letty seemed to be

in her element amongst children: she would talk to them, walk with them, sing for them, do anything to please them; and the result of course was, that she was by far the most popular personage at Chestnut-tree Cottage.

The dilapidated bandboxes were now produced, and there lay the cause of all Cousin Letty's anxiety regarding those ill-used articles—they had been filled with toys for the children. Alas! the drum was beaten as flat as the tambourine, and all the wind-instruments—flutes, flageolets, and trumpets—had breathed their last. The only box that had escaped, was that containing Cousin Letty's now bonnet. The children, however, were consoled by promises of taking them into town the following day, to supply the places of the broken toys.

Letty was disappointed at the absence of her favourite, Mary Middleton, who had been on a visit to the Lakes with some friends for the last fortnight, but had appointed to return on the day of Cousin Letty's arrival. However, the evening wore away, and Mary came not; and Cousin Letty, though the most unselfish creature in the world, could not help fearing that she had become an object of less consequence to Mary than she had been. 'Perhaps,' thought she, very naturally, 'Mary has a lover: how can I expect her to quit a delightful party amongst the Lakes merely for my society? No,' she continued, mentally soliloquising; 'Mary is not in love; her letters have been too cheerful, too ingenuous for that; besides, she has promised never to fall in love without consulting me; and arriving at this satisfactory conclusion, Cousin Letty, after sitting up very late in expectation of Mary's arrival, was persuaded by Mrs Middleton to go to bed, as she was sure she must be dreadfully wearied, as well as suffering from her bruise, and there was no chance of her daughter's return until the following day. At that moment, a chaise stopped at the garden-gate; and the next, Cousin Letty was clasped in the hearty embrace of Mary Middleton.

'Dear, dear Cousin Letty!' said Mary, 'I was determined to come, if I had walked all the way from Keswick, which I was likely to do; for every place was taken—every chaise monopolised for days to come by the crowd of visitors to the Lakes.'

'But how, then, did you get home, Mary, dear?' asked her cousin.

'In a return-chaise. I saw it pass, and bribed the postilions with all my money to bring me to our door.'

'How very imprudent!' said Letty. 'Suppose they had picked up another passenger by the way?'

'Oh, they did! I insisted upon it. I was to pay handsomely for the chaise; so it was all my own, to do what I pleased with; and do you know, Cousin Letty, I never before guessed the delight of keeping a carriage, for it enabled me to relieve the weariness of a long journey to a poor woman, who was footsore, with an infant in her arms, and two little children walking by her side. Oh, how thankful she was! and how soundly the children slept all the while! Of course, I gave her all my pocket-money, and have left papa to pay for the chaise.'

This was an act after Letty's own heart, and she pressed Mary's hand in sympathy, though at the same time prudently reproving her for her Quixotic generosity. 'I think, dear Mary, you were very wrong to travel alone. Suppose any of those adventurers about the Lakes had run off with you?'

'Oh, but I never will be run off with,' said Mary laughing.

'You are not in love yet, then, Mary?'

'No, dear Cousin Letty—no more in love than you are, or likely to be. I mean to lead just the same happy sort of single life that you lead.'

'I should be very much disappointed if I thought you were in earnest. No, no, Mary; I am resolved

that you shall marry, and intend to look out for a suitable husband for you; some excellent, agreeable person—just such a man as I might have fallen in love with myself in my girlish days.'

'Very well, cousin,' said Mary. 'When I see any one enjoying your particular favour, I shall make up my mind that he's to be my husband; but you must undertake all the courting—I'm sure I could never endure that. What on earth can be so ridiculous as two rational beings saying to each other: "I love you?" Oh, horrible!'

Perhaps Letty was not altogether of the same opinion. She remembered when her cousin, John Middleton, used to call her his 'little wife.' Seven years older than herself, he went into the world to seek his fortune. The fondness of the child grew into the love of the girl: how eagerly did she look for his return! And he, to surprise his dear Cousin Letty, said nothing of what had happened, but came home married! And so people supposed that Cousin Letty had never been in love, and wondered why she lavished such devotion on John Middleton's eldest daughter.

On the following day, Letty and Mary sallied forth to the neighbouring town on a shopping expedition. How well they both looked! Mary, with her Hebe-like face, and Cousin Letty bearing an amazing resemblance to her, but—ah! that fatal but—fifteen years older. Still, Mary was so carelessly dressed in her old Dunstable bonnet and blue ribbons; while Letty's town-made eased white silk, would have taken ten years off any woman's age, that the result was, as they passed through the principal street of the little town, Letty excited almost as much admiration as the more youthful beauty of Mary Middleton.

'I wish, cousin,' said Mary, 'you would go with me to see a poor old woman, a pensioner of mine—that is, if you're not ashamed of being seen in so horrible a part of the town.'

'How did she excite your compassion, Mary?'

'Oh, poor creature! I saw her one day with her basket of tapes and needles, in crossing the street, knocked down by a carriage; she was much hurt, and I had her taken carefully home and attended to. I should like to know how she's going on; will you come with me, Letty?'

'Of course I will, dear Mary,' said her cousin, delighted at every manifestation of kind-heartedness in her favourite.

They now went from one dirty lane into another, until they arrived at the miserable lodging-house of Mary's pensioner.

'How is old Peggy to-day?' asked Mary of the woman who opened the door.

'Very low indeed, ma'am; the doctor's with her just now. He's as attentive to the poor old soul as if he was to be paid for it.'

'I am very glad to hear it,' said Mary. 'I hope everything that was necessary has been procured for her?'

'O dear, yes, ma'am. I made your money go further than anybody would think, and the doctor gave me five shillings besides, and brought a bottle of wine in his pocket this morning. Just come this way, if you please, ma'am;' and the woman shewed them up an old, creaking, rickety staircase, and threw open the door of the room where lay her poor lodger. An agreeable surprise awaited Cousin Letty, for in the surgeon standing by the bedside she recognised Mr Leslie, who had been so attentive to her on the previous day. A cordial shaking of hands took place, for Mary Middleton had met Mr Leslie twice at parties, and she herself had gone to solicit his attendance on old Peggy. Mr Leslie inquired most anxiously concerning the injuries of his agreeable chaise-companion, who assured him her arm gave her very little inconvenience; in fact, that it was quite well. Mr Leslie said he was delighted to hear

it, though he unaccountably looked the very reverse. Arranging everything for the comfort of the old woman, who, according to the surgeon's opinion, was slowly recovering, they left the house, proceeding together as far as the High Street, when Mr Leslie regretted that one or two professional calls prevented his having the pleasure of accompanying them to the cottage.

'But I trust you will favour us with a call very soon,' said Letty at parting, as her hand, in her own cordial way, rested for a moment in his.

'I fear I have scarcely an excuse for so desirable a visit,' said the surgeon rather gallantly, and somewhat confused.

'You forget my bruised arm,' said Letty, becoming suddenly oblivious of having declared it was quite well.

'True,' said Mr Leslie; 'it really must be attended to.'

'Mamma will be delighted to see you, Mr Leslie,' said Mary kindly, 'for she fears the children are going to have severe colds, and really I fear so too.' Mary had never before, however, been so anticipatory of sore throats and medical advice. It was agreed, therefore, that Mr Leslie was to call at the cottage on the following day, and he took his leave. The ladies now proceeded to the principal toyshop of the town, where the children, to whom Mary had so bountifully promised a set of colds and Cousin Letty a set of toys, were to meet them.

All the instruments the Passions played upon, and which have since returned the compliment, were selected. Tom took a 'war-denouncing trumpet' of blue-painted wood, while Charlie began to beat a fiery-looking little drum 'with furious heat.' Letty's liberality having now gone almost as far as the covetous eyes of the children, the party stepped into Mr Middleton's double phaeton, which was waiting for them, accompanied by the 'celebrated brass-band,' the children having 'snatched their instruments of sound,' and, at the risk of frightening the horses, making a considerable din through the street and along the road to the cottage.

After dinner, the conversation happening to turn upon the morning's rencontre: 'It is a pity,' observed Mr Middleton, 'that Mr Leslie is not more successful in his profession.'

'Why—is he not considered clever?' asked Letty.

'Oh, very,' he replied; 'and highly esteemed. He supports an aged mother and a poor blind sister by his practice, which, however, they say, yields but a meagre income.'

'Is he not married?'

'Unfortunately, not, Letty.'

'Why, he must be nearly as old as I am,' remarked Letty, very naturally.

'O no,' interposed Mary. 'I heard a lady say the other evening, that Mr Leslie was only thirty.'

'Well, my dear, I'm only thirty-five.' Even Cousin Letty's good sense was not proof against the sensitiveness of being considered older than she was.

'The wisest thing Leslie could do would be to marry,' observed Mr Middleton. 'A wife and family are as indispensable to a medical man as his degree or case of instruments.'

'I'm sure, my dear,' said his good-natured wife, with kind intentions towards the surgeon, and maternal anxiety for her children, 'we might give Mr Leslie a job by having all the children vaccinated over again; and, indeed, John, you and Letty and Mary would be the better of it too, if the small-pox were to break out.'

Mr Middleton laughed heartily at his wife's ingenious device for extending Mr Leslie's practice, but positively declined being one of the party to be operated upon.

On the following day, however, he gave Mr Leslie a hearty welcome to the cottage, where he shortly became a constant visitor and a great favourite. The ladies very soon looked upon him as indispensable to their

romantic walks and delightful drives; Letty thought it the pleasantest season she had ever passed; and Mary wondered why the long summer day appeared so short. 'How fortunate,' she would say to Letty, 'that we made Mr Leslie's acquaintance: he is so intellectual, so good-natured, and'—

'And so good-looking—eh, Mary?'

'I really don't care much about good looks,' said Mary carelessly, as a smart blush made her cheek tingle for the abominable hypocrisy.

'Do you know, Mary,' said Letty, as if anxious to ascertain her sentiments on the occasion, 'I often think that Mr Leslie is in love with you.'

'Well, I assure you, Cousin Letty, papa said yesterday, he felt convinced that Mr Leslie was only prevented by his poverty from proposing for you.'

Thus were all parties puzzled. Mrs Middleton rather entertained a belief that Mary had won Mr Leslie's affections, until her husband pointed out the greater advantage in a match with Letty, who really was still very pretty, and, in spite of all her protestations to the contrary, could not be blamed were she to enter into a marriage with such a man as Mr Leslie.

'If Cousin Letty marry, it will be all the worse for our children, you know, John,' said Mrs Middleton, 'and for Mary especially, who has always been taught to rely on Letty for everything.'

'Now, Bess, that is selfish and unlike you,' said her husband reprovingly. 'I thought you would have been rejoiced at the prospect of such a dear kind soul as Cousin Letty having a good husband; and she'd be sure to make Leslie happy.'

'But remember the disparity of age, John.'

'Only five or six years,' said Mr Middleton; 'that's of no consequence.'

'Yes; but it's on the wrong side, John,' said Mrs Middleton, conscious of being a few years her husband's junior.

The good people of the little town had long been busily talking about Mr Leslie's incessant attentions at the cottage, and were much perplexed in their conjectures which of the Miss Middletons he was in love with. June, July, August, and very nearly September had now passed away, and the family were to leave the cottage on the following morning. Surely this last day would bring about an *éclaircissement*.

'Edward,' said Mrs Leslie, observing her son thoughtful and unhappy, 'are you going to the cottage this evening?'

'Yes, mother, instantly. I can bear this suspense no longer: I must know my fate, whatever it may be.'

'Surely, my dear son,' said Mrs Leslie, 'you cannot be altogether without hope. Miss Middleton, if she is really the kind, warm-hearted creature she appears to be, must have given some indication of preference to justify your avowal.'

'But my poverty has made me so fearful, mother, lest my motives should be attributed to mercenary views, that I have scrupulously avoided every opportunity of eliciting her sentiments towards me. I doubt even whether the devotion I feel can justify my supposing that any woman would consent to share my miserable prospects.'

'Ay,' said the old lady mournfully—'prospects blighted by the burden of maintaining your mother and helpless sister. My dear son, we have indeed been a hindrance to you.'

'A hindrance, mother! Rather than you should think so, or that my present project should give you one pang, the words that were to decide my fate for ever shall remain unspoken. Though her love is a blessing I covet above all others, I will forego the chance of obtaining it. I tell you, mother, there is not any sacrifice I would not make to secure your happiness, and that of my dear helpless sister.'

At this rather critical moment, Miss Middleton was

announced. Letty had walked to town for the purpose of bidding adieu to Mrs and Miss Leslie, of whom Mary had already taken leave in the morning—for of course a cordial friendship amongst the ladies had resulted from Mr Leslie's great intimacy at the cottage. There was an unusual embarrassment and sadness in this last visit of Letty, which no one strove to overcome; it was best, therefore, to make it as brief as possible. Kind farewells were exchanged; while the poor blind girl, at parting, said in a low voice, not to be overheard: 'I cannot see your face with my eyes, Miss Middleton: I see with my heart, and that tells me that you must be beautiful, because you are good and kind. Have compassion on my dear brother, if—' The approach of Edward caused her to leave the request unfinished. Letty, half comprehending her meaning, pressed her hand in sympathy, while a deep blush overspread her cheek. Mr Leslie now drew her arm within his, and they commenced their walk in silence; nor was it till they had got beyond the town, and reached one of those beautiful quiet avenues leading to the cottage, that he had resolution to enter upon the theme which absorbed him. 'I am thankful, Miss Middleton,' he began, 'for this unexpected opportunity of addressing you alone; it gives me courage to reveal—what I had half determined never to divulge. Your approval or disapproval shall govern me; and should you deem my wishes too presumptuous, I promise never again to breathe them to human being.' Mr Leslie paused, as if expecting some reply, but Letty was silent, and Mr Leslie proceeded: 'I think I cannot be reproached by Mr Middleton for taking advantage of the intimacy to which he admitted me. My attentions have been—so equal—or rather more particularly directed to yourself than to his daughter—' There—there; I see you are surprised at my presumption.'

'No, no; go on, go on,' said Letty hurriedly, and replacing her arm in his, which, the instant before, from some feeling known only to herself, she had suddenly withdrawn.

'That is indeed kind,' said Mr Leslie. 'May I hope, then, that you, whose happiness seems to be derived from making others happy, will be my advocate with—Mary; with her father, if need be?'

'Yes,' said Letty, echoing his words in a low but earnest voice; 'you are right—my happiness can only be derived from making others happy: I will do all I can to promote yours.'

'Thanks, kindest, best of women,' said Mr Leslie, taking the little hand that lay trembling on his arm, and pressing it to his lips. They had now reached the cottage. Mr Leslie proceeded to the drawing-room; while Letty hurried to her own chamber, where, securing the door, she threw herself on her knees, and covering her face with her hands, as if ashamed of being seen even by the light of heaven, burst into a passionate flood of tears. Poor Letty! the only consolation at that moment was, that her secret was known only to herself. 'How foolish of me,' she said, after a long interval, in which she had striven to recover some degree of composure—'how foolish to suppose, even for a moment, that he could ever care for me! My heart ought to have been secure from such weakness. Well, well, my punishment is somewhat severe; but suppose Mary loves him as—as I do! Oh, then, 'tis far better that I should suffer, than that her young heart should be wrong by any preference for me; and let me be thankful that he does not even guess at my folly.'

Just at this moment, 'Cousin Letty,' whispered the sweet voice of Mary, as she knocked for admittance.

'Heaven help me!' ejaculated Letty, as, unable to frame any excuse for refusal, she summoned up courage to open the door for her young and unconscious rival.

'Dear Cousin Letty,' said Mary, 'I have so much to tell you that you will be glad to hear. Mr Leslie—But you look sad, cousin: what is the matter?'

'Nothing but fatigue,' said Letty, forcing a smile. 'I think, Mary, I can guess what you have to communicate. Mr Leslie has declared his love for you, has he not?'

'Ah, he told me you knew all,' said Mary, 'and were his friend; but I would not listen to him until I had your sanction, dearest Letty.'

'And do you love him, Mary?'

'Now, I can tell you the truth, Letty'—and Mary threw her arms round her in her old childlike, caressing way—'though I would not for the world have confessed it while I fancied he entertained a preference for you; and I think I could have worn the willow gracefully for the sake of seeing you married, dear Letty; and though you have often told me that I was the keeper of your heart, yet, to tell you the truth, I sometimes felt jealous lest Mr Leslie should steal it away from me.'

'No, no, Mary, be assured he seeks no heart but yours.'

'O yes; he has quite convinced papa of that.'—Pride checked the tear that started to Letty's eye.—'Then you approve, dear Letty?'

'Certainly, love; you know I always said I should approve of your husband.'

'No, no,' said Mary, correcting her; 'I always said, that whoever you were very fond of, I would marry; and I know you have the highest opinion of Mr Leslie; and so you ought, for he says you are the kindest creature in the world. Do you think I shall be happy, Letty?'

'I am sure you will be happy, Mary;' and kissing her affectionately, Letty descended with her to the drawing-room. But if any one deserved happiness, it was Letty, for the admirable manner in which she mastered her own feelings, and entered so cordially into the plans of the young people. Who could have imagined that apparently tranquil heart to have been the scene of so much tumult?

All arrangements were made that evening. It was decided that the marriage was to take place at the end of the following month; and as business of considerable profit and importance would compel Mr Middleton to be in London, he resolved that his wife and daughter should accompany him, and the ceremony be performed there. Accordingly, it was recorded in the *Morning Post*, and copied into all the Cumberland newspapers, that on the 26th October 1835, at St James's Church, 'Edward Leslie, Esq., was married to Mary, daughter of, &c. On the day of their return to Cumberland, as the carriage stopped at the surgeon's door, a clean, neat-looking old woman, carrying a basket of smallwares, dropped a courtesy to Mrs Leslie: 'God bless you, madam, and make your new home a happy one!'

'I am glad to see you recovered and looking so well, Peggy,' said Mary; while Edward, pressing his wife's hand, whispered: 'Mary, depend upon it, Cupid was disguised as old Peggy when we met by her bedside.'

Cousin Letty, with her usual generosity, insisted on presenting Mary with a wedding-portion of £500; and as Mr Middleton gave his daughter the same sum, the report went that the surgeon was a rich man. Money makes money; his practice waxed rapidly, realising a handsome fortune. Cousin Letty devoted herself to Mary's children and those of her cousin, John Middleton; but amongst old friends and new friends, she loved to drop in to purchase innumerable pairs of stockings at 'Jonathan Stevens, Hosier,' but chiefly for the purpose of a kind gossip with the comely Quakeress, who often talked over the incidents of their adventures by the Carlisle coach, generally concluding with the remark: 'Truly, though friend Leslie hath doubtless done well, thou shouldst have been the bride that I would have chosen for him.'

But the gentle Quakeress, like most human disposers of events, was wrong; for although Edward Leslie and

his wife enjoyed as much happiness as is generally allotted to mortals, yet it fell far short of the holy tranquillity which self-denial imparted to the future years of Cousin Letty.

THE RATIONALE OF PESTILENCE.

DR ARNOTT was commissioned, in February last, to inquire into the causes of the extraordinary and lamentable mortality which took place at Croydon, immediately after certain new works had been established, under the care of the General Board of Health, for the draining of that locality. He has lately sent in his report, pointing out that the evil had arisen from imperfections in the means of drainage in connection with certain peculiarities in the physical geography of the district. We have nothing to say about the local case, beyond claiming a lenient consideration of the errors of the Board, on account of the tentative character of all plans for securing the public health: what interests us much more, is a remarkably luminous exposition which Dr Arnott has given, in his Report, of the general laws of health in crowded populations.

He starts with a remark on the recentness of all sound knowledge of the human organisation. Till the year 1774, nobody on earth knew that there was a substance called *oxygen*, forming a large proportion by weight of a majority of all things in and on the globe. Nor did any one then know that water was a compound of eight parts by weight of this oxygen with one part by weight of another substance called *hydrogen*. It was not then dreamed of that all vegetable bodies consist chiefly of these two elements, in combination with some proportion of another called *carbon*. Nor was the truth suspected, that animal flesh consists of these three elements, with the addition of a fourth (*nitrogen*), which, when mixed with one-fourth part by weight of oxygen, forms our common atmospheric air. Even a very few years ago, no one imagined how entirely the human frame was under the influence of chemical, mechanical, and vital laws, giving it altogether much the character of a machine, and forming the only sound basis of all doctrines as to health and disease.

When some not very important parts of this frame are hurt, as when fingers are wounded, 'the general health,' says Dr Arnott, 'may continue nearly as usual, and may be gradually working the cure of the hurt. Such occurrence is called local disease; but if any event change hurtfully the composition or condition of the blood—out of which all other parts of the body are formed, and are continually nourished or supported, and which has itself to be maintained in a healthy state by, 1st, the introduction, at short intervals, of fresh matter from the digestive organs; 2dly, by the removal from it of impurities through the skin, kidneys, &c.; and lastly, by the action, fifteen times every minute, of fresh air admitted to near contact with it in the lungs—then every part of the body may be thrown at once into a disordered or unhealthy state, nearly as when a stream which supplies water to bleachers, brewers, dyers, bakers, &c., is defiled, and spoils the work of all who use it. Such change constitutes what is called general disease. General disease may be mere weakness of all the parts of the body arising from insufficient or bad food or drink, or from want of pure air; but a change may be produced in the blood so sudden and so great as to kill instantly, as when prussic acid enters it from the stomach, or various mephitic gases from the lungs, and then the agent is called a poison; or, lastly, the deleterious admixture or change may not be strong enough to kill instantly, but may only produce violent commotion or disturbance of the system, lasting for a longer or shorter time, which, by the power of self-repair in the system, may be overcome and be followed by re-established health. Many of such general diseases as the last described

are called fevers, because of the increased heat which usually accompanies them. It is thus that a little of the virus of small-pox, introduced into the blood on the point of a lancet, produces soon the fever of small-pox, lasting for twelve or fourteen days; and that the inhaling for a short time the atmosphere of a foul jail or ship will produce the jail or ship fever.'

Dr Arnott then proceeds to shew how the various substances which serve to us as food, and also those which are capable of acting towards us as poisons, are all formed from the small group of elements just enumerated, only in different proportions—oxalic acid, for instance, being from the same combination as sugar, prussic acid from the same as vinegar, and so forth. We do not know how it is so; but we know the facts well, and can turn them to very useful account. It so happens, that the simple chemical unions in general are readily and easily formed both in nature and art, but not easily subverted; while complex unions, on the contrary, requiring a delicate balance to be obtained between many things, are difficult to form, and very easily subverted. 'The chemist was not able until lately to decompose water; and he still labours in vain to build up out of the well-known cheap elements most of the precious compounds which the as yet mysterious actions of vegetable and animal life present to us. He cannot yet chemically make opium, or wheat-flour, or sugar, but there is a progress in that direction, for he not only knows that the foul horribly-offensive water which has served to wash or purify coal-gas at the gas-works, contains the elements of lavender, camphor, otto of roses, and other perfumes, but he can now extract from it a near approximation to some of them; and strange to say, he can now produce by his art the exquisite flavour of the strawberry and pine-apple, in any climate or season, without aid from garden-beds or sunshine.'

The learned author goes on to say: 'The preceding statements furnish the explanation of how animal and vegetable substances when they die, and the elements are no longer held together by the powers of life, so quickly undergo change, and with such variety of results. What is called the decay, rotting, or putrefaction of these substances, is the spontaneous decomposition which then takes place, much hastened and modified when water is present and the temperature is high, and in the course of which a series of new and gradually more simple combinations are being formed, tending to leave the elements in stable arrangements. This explains the changing odours, tastes, and other qualities which during such processes are always to be observed. A good example of such a series is that which occurs in the arts of brewing and spirit-making. First, barley being wetted and warmed, or malted, has its starch converted into sugar; then by another process or step, that sugar is converted into alcohol or ardent spirit; and by a third, the alcohol may be converted into vinegar.

'Because certain of the possible transient combinations of the elements of organic substances during the putrefactive dissolution of these are noxious to animal life, and because from becoming chiefly æriform, they rise into the atmosphere as effluvia, we can understand how dangerous it may be for persons to be in or near places where such processes are actively going on; and we can understand why the effect in producing diseases should differ according to the quantities and kind of dead matter, and the degrees of warmth and moisture which favour the chemical actions. As a man in breathing takes in air which is immediately applied to the internal surface of all the air-cells of the lungs, a surface much more extensive than that of the stomach, which can absorb so quickly prussic acid or wine, we can understand how suddenly an æriform poison pervading the atmosphere may be absorbed into the system. The fact of such quick absorption by the

lungs is familiar to us in other cases; as when a man having taken a few whiffs or inspirations from a bottle of ether, absorbs so much of the ether into his system that for twenty-four hours any stranger approaching him perceives ether vapour escaping in his breath; and again, as when a patient who inhales chloroform mixed with air takes it so quickly into his blood that it reaches the brain often in less than a minute, and deprives him of all sense. Some persons become intoxicated by breathing for a time the atmosphere of a spirit-cellar or gin-shop; and there are undoubted instances of the infection of small-pox, measles, &c., having been communicated during a face-to-face encounter of only a few moments.

But probably the most hurtful to man of all the aerial poisons, is that of his own expelled breath when detained long around him, and breathed again. A considerable proportion of the solid aliment and drink which he receives is thrown off by the lungs as a kind of excrementitious matter, in the forms of carbonic acid, water, and æriiform organic matter. The last-named portion gives a certain odour to the breath of many persons even in good health, and with impaired health it becomes copious, offensive, and pernicious. This organic matter, probably at first, when it may be called fresh, is harmless, for a mother does not fear to kiss her beautiful child, nor do persons in a crowded church, or other place where healthy people assemble, much fear their neighbours, but there is no doubt that it soon becomes putrid and noxious. In early states of society, before glass-windows were used, and when men lived almost in the free air, they had no notion of this poison; and that ignorance continuing through later times, explains to us many of the facts connected with the generation and spread of plagues or epidemics.

Dr Arnott then adduces some notable cases of quick and extensive mortality from multitudes being pent up in narrow spaces where the supplies of pure air which they require could not reach them. He shews that all trustworthy histories of epidemics in past times are true illustrations of what science now teaches on this subject. For example—

'In the last century, from the year 1742 to 1748, the English government, co-operating with German allies, maintained about 20,000 troops in Flanders and part of Germany, where they had to suffer the chances and hardships of war in a country of which many parts are low and marshy. The physician to the forces was Dr Pringle, afterwards Sir John, and president of the Royal Society—a man, like Sydenham of the preceding century, of great natural sagacity and of much knowledge. He knew not oxygen, nor, therefore, the composition of organic bodies; but he had no favourite theory to support; and so, in his admirable book on *Diseases of the Army in Camp and Garrisons*, he described things and occurrences with rare fidelity. Much of his history had to record the effects on the soldiers of the noxious atmosphere of marshes, camps, and barracks, in different seasons and in different conditions of heat and moisture, and therefore it has the most direct bearing on the questions here discussed. The testimony given by him may be recapitulated thus—When a body of healthy men arrived in a marshy region in temperate weather, cases of common ague soon appeared; if the station was near a marsh, and on the side of it towards which the wind blew, the number of sick rapidly increased; if the wind then changed, there was again speedy relief. If the weather became warm, quickening the decomposition of plants and animals that might die and rot in the marsh, the sickness increased; with change towards cold, the contrary effect occurred; and with frost, the fever ceased. If the marsh was foul with animal impurities, bowel-irritation, even to the extent of dysentery, would arise, and the fever would be aggravated to the form of double-tertian, or remittent, and soon to the continued

form; with higher temperature or more filth, such as naturally accumulates in encampments, the fever would become more ardent or intense, and be called bilious-remittent. Even far from low or wet ground, if the filth of a camp were allowed to accumulate during hot weather, in the form of rotting straw, &c., the bilious-remittent would readily spring up; and if the tents or barracks were crowded, it would assume a putrid and malignant character, and prove contagious and highly destructive. If the sick themselves were gathered into a crowded and ill-ventilated hospital, the mortality and rapid communication of the fever or dysentery to other patients became fearful; and, lastly, if the hospital sick, from the necessities of war, had to be placed in ships, as then managed, for transport, the chance of life to any individual was small indeed. Of a number of sick who were shipped from hospitals on the Rhine, near Worms, for transport to Ghent, more than half perished on the voyage, and many of the remainder afterwards. A proof of the virulence of the disease was, that of twenty-three healthy journeymen whom a tradesman at Ghent set to refit old tents which had been used in the ships as bedding for the sick, seventeen died of the distemper. The disease, when in the most aggravated form, produced gangrenous buboes and boils, like the plague of the Levant; and in the previous degrees of severity, it was identical in character with the fevers elsewhere called jail, hospital, and ship fevers, which can anywhere in temperate climates be generated or bred under the like circumstances.'

Dr Arnott also relates several instances that have come under his own observation, both in service abroad and in his practice at home, of the directly mischievous consequences of defective ventilation. The following cases possess a lively interest for all who have any control over large assemblages of either human beings or the lower animals:—'In March 1836, mention was made in parliament of a school at Norwood for London pauper children, at the time containing nearly 700, where thirty had died within a short time, and the rest were said to be nearly all unwell, owing, it was thought, to scanty or bad food supplied to them by the proprietor. On the following day, the Poor Law Commissioners requested the writer of this to visit the school and to report. On his way out, he visited another school, containing 150 children of the same class, on Brixton Hill. This was not crowded, and the children, among whom only two had died in three years, looked remarkably healthy. On entering a room of the Norwood school, in which nearly 300 boys were present, he was struck by the offensive state of the atmosphere. Although on a cold day, the air, from want of ventilation, was hot and foul; and in such air the children lived through both days and nights. The children all had a pale, unhealthy look, and on inquiry it was found that every form of scrofulous disease abounded among them—swelled glands, skin eruptions, sore eyes, scald-head, diarrhoea, dropsy, and fever. The food given to them, however, he found to be better than what is usually supplied in establishments of the kind, and the evident cause of their illness was want of fresh air. He reported accordingly. The faults being remedied, the school became as remarkable for the good health of the scholars as for their number (which soon exceeded 1000) and the excellent educational arrangements.

'About twelve years ago, a new monkey-house was constructed in the Zoological Garden here; no expense was spared to shew hospitality to the strangers; the house was made like an English drawing-room, with open fireplaces near the floor—supposed in England to secure good ventilation. Above sixty healthy monkeys were placed in it. In a month, fifty-one of these were dead, and the rest seemed dying. Every one which died was opened, and tubercles were said to be found

in the lungs, proving consumption. The writer of this was consulted, and he found in the monkey-house only an aggravated case of what had existed at the Norwood school. As the flame of a candle is soon extinguished in its own smoke if an inverted coffee-cup be held over and around it, although the cup remain open below, so was the life of the monkeys extinguished by their own hot breath, caught and retained in the upper part of the room where their cages were, although with open chimneys below; and the air, soon saturated with the matters thrown off from their lungs, being unable to take more, left in the lungs what was deemed the tuberculous matter of consumption. Openings for ventilation were subsequently established near the ceiling into a heated shaft or chimney, and now healthy monkeys can live in that room. Many are the human beings still treated nearly as these monkeys were, only not so completely imprisoned in their rooms, and during their occasional absence, the air is partially changed.

In 1843, the authorities determined to send 500 convicts to Van Diemen's Land in one ship, the *Anson*, an old seventy-four. Dr Millar, the surgeon, feared that this greater than usual number of prisoners, of whom only a small part could be allowed to be on deck for air at a time, would breed disease on the lower decks. He caused, however, four simple ventilating pumps to be made on board by the carpenter, costing, as stated in his report to the Admiralty, only 30s. each, like one which he had seen in the house of the writer of this, and with these he secured excellent health to his charge during the whole voyage. It is painful to think of the destruction of human life which has taken place in emigrant ships during the last few years from imperfect ventilation. Dr Andrew Combe, the author of the popular works on the means of preserving health, made a voyage to America three years ago in an emigrant ship in which a destructive fever was bred for want of ventilation, and in his letter published on his return he expressed his conviction that a simple ventilating pump would have prevented all the evil. His own death, which happened soon after, was hastened by what he then suffered.

From the whole facts assembled, the inference seems irresistible, that ventilation, or the constant substitution of pure air taken from the general atmosphere for the contaminated air of enclosed localities, is one of the most important parts of the art of preserving and restoring health.

DUCK-SHOOTING ADVENTURE UPON THE CHESAPEAKE.

Of the two dozen species of American wild-ducks, none has a wider celebrity than that known as the canvas-back; even the eider-duck is less thought of, as the Americans care little for beds of down. But the juicy, fine-flavoured flesh of the canvas-back is esteemed by all classes of people; and epicures prize it above that of all other winged creatures, with the exception, perhaps, of the reed-bird or rice-bunting, and the prairie-hen. These last enjoy a celebrity almost, if not altogether equal. The prairie-hen, however, is the *bon morceau* of western epicures; while the canvas-back is only to be found in the great cities of the Atlantic. The reed-bird—the American representative of the ortolan—is also found in the same markets with the canvas-back. The flesh of all three of these birds—although the birds themselves are of widely different families—is really of the most delicious kind: it would be hard to say which of them is the greatest favourite. The canvas-back is not a large duck, rarely exceeding three pounds in weight. Its colour is very

similar to the pochard of Europe: its head is a uniform deep chestnut, its breast black; while the back and upper part of the wings present a surface of bluish-gray, so lined and mottled as to resemble—though very slightly, I think—the texture of canvas: hence the trivial name of the bird.

Like most of the water-birds of America, the canvas-back is migratory. It proceeds in spring to the cold countries of the Hudson's Bay territory, and returns southward in October, appearing in immense flocks along the Atlantic shores. It does not spread over the fresh-water lakes of the United States, but confines itself to three or four well-known haunts, the principal of which is the great Chesapeake Bay. This preference for the Chesapeake Bay is easily accounted for, as here its favourite food is found in the greatest abundance. Round the mouths of the rivers that run into this bay, there are extensive shoals of brackish water; these favour the growth of a certain plant of the genus *callinaria*—a grass-like plant, standing several feet out of the water, with deep green leaves, and stemless, and having a white and tender root. On this root, which is of such a character as has given the plant the trivial name of wild celery, the canvas-back feeds exclusively; for wherever it is not to be found, neither does the bird make its appearance. Diving for it, and bringing it up in its bill, the canvas-back readily breaks off the long lanceolate leaves, which float off, either to be eaten by another species—the pochard—or to form immense banks of wrack, that are thrown up against the adjacent shores. It is to the roots of the wild celery that the flesh of the canvas-back owes its esteemed flavour, causing it to be in such demand that very often a pair of these ducks will bring three dollars in the markets of New York and Philadelphia. When the finest turkey can be had for less than a third of that sum, some idea may be formed of the superior estimation in which the web-footed favourites are held.

Of course, shooting the canvas-back duck is extensively practised, not only as an amusement, but as a professional occupation. Various means are employed to slaughter these birds: decoys by means of dogs, duck-boats armed with guns that resemble infernal-machines, and disguises of every possible kind. The birds themselves are extremely shy; and a shot at them is only obtained by great ingenuity and after considerable dodging. They are excellent divers; and when only wounded, almost always make good their escape. Their shyness is overcome by their curiosity. A dog placed upon the shore, near where they happen to be, and trained to run backwards and forwards, will almost always seduce them within shot. Should the dog himself not succeed, a red rag wrapped around his body, or tied to his tail, will generally bring about the desired result. There are times, however, when the ducks have been much shot at, that even this decoy fails of success.

On account of the high price the canvas-backs bring in the market, they are pursued by the hunters with great assiduity, and are looked upon as a source of much profit. So important has this been considered, that in the international treaties between the states bordering upon the Chesapeake, there are several clauses or articles relating to them that limit the right of shooting to certain parties. An infringement of this right, some three or four years ago, led to serious colli-

sions between the gunners of Philadelphia and Baltimore. So far was the dispute carried, that schooners armed, and filled with armed men, cruised for some time on the waters of the Chesapeake, and all the initiatory steps of a little war were taken by both parties. The interference of the general government prevented what would have proved, had it been left to itself, a very sanguinary affair.

Staying for some days at the house of a planter near the mouth of a small river that runs into the Chesapeake, I felt inclined to have a shot at the far-famed canvas-backs. I had often eaten of these birds, but had never shot one, or even seen them in their natural habitat. I was, therefore, anxious to try my hand upon them, and I accordingly set out one morning for that purpose. My friend lived upon the bank of the river, some distance above tide-water. As the wild celery grows only in brackish water—that is, neither in the salt sea itself nor yet in the fresh-water rivers—I had to pass down the little stream a mile or more before I came to the proper place for finding the ducks. I went in a small skiff, with no other companion than an ill-favoured cur-dog, with which I had been furnished, and which was represented to me as one of the best duck-dogs in the country. My friend having business elsewhere, unfortunately could not upon that day give me his company; but I knew something of the place, and being *au fait* in most of the dodges of duck-hunting, I fancied I was quite able to take care of myself.

Floating and rowing by turns, I soon came in sight of the bay and the wild-celery fields, and also of flocks of water-fowl of different species, among which I could recognise the pochards, the canvas-backs, and the common American widgeon (*Anas Americana*). Seeking a convenient place near the mouth of the stream, I landed; and, tying the skiff to some weeds, proceeded in search of a cover. This was soon found—some bushes favoured me; and having taken my position, I set the dog to his work. The brute, however, took but little notice of my words and gestures of encouragement. I fancied that he had a wild and frightened look, but I attributed this to my being partially a stranger to him; and was in hopes that, as soon as we became better acquainted, he would work in a different manner. I was disappointed, however, as, do what I might, he would not go near the water, nor would he perform the trick of running to and fro which I had been assured by my friend he would be certain to do. On the contrary, he cowered among the bushes, near where I had stationed myself, and seemed unwilling to move out of them. Two or three times, when I dragged him forward, and motioned him toward the water, he rushed back again, and ran under the brushwood.

I was exceedingly provoked with this conduct of the dog, the more so that a flock of canvas-backs, consisting of several thousands, was seated upon the water not more than half a mile from the shore. Had my dog done his duty, I have no doubt they might have been brought within range; and, calculating upon this, I had made sure of a noble shot. My expectations, however, were defeated by the waywardness of the dog, and I saw there was no hope of doing anything with him. Having arrived at this conclusion, after some hours spent to no purpose, I rose from my cover, and marched back to the skiff. I did not even motion the wretched cur to follow me; and I should have rowed off without him, risking the chances of my friend's displeasure, but it pleased the animal himself to trot after me without invitation, and, on arriving at the boat, to leap voluntarily into it. I was really so provoked with the brute, that I felt much inclined to pitch him out again. My vexation, however, gradually left me; and I stood up in the skiff, turning over in my mind what course I should pursue next.

I looked toward the flock of canvas-backs. It was a

tantalising sight. They sat upon the water as light as cork, and as close together as sportsmen could desire for a shot. A well-aimed discharge could not have failed to kill a score of them at least. Was there no way of approaching them? This question I had put to myself for the twentieth time at least, without being able to answer it to my satisfaction.

An idea at length flitted across my brain. I had often approached common mallards by concealing my boat under branches or furze, and then floating down upon them, impelled either by the wind or the current of a stream. Might not this also succeed with the canvas-backs? I resolved upon making the experiment. The flock was in a position to enable me to do so. They were to the leeward of a sedge of the *vallisneria*. The wind would carry my skiff through this; and the green bushes with which I intended to disguise it would not be distinguished from the sedge, which was also green. The thing was feasible. I deemed it so. I set about cutting some leafy branches that grew near, and tying them along the gunwales of my little craft. In less than half an hour, I pushed her from the shore; and no one at a distance would have taken her for aught else than a floating raft of brushwood.

I now pulled quietly out until I had got exactly to windward of the ducks, at about half a mile's distance from the edge of the flock. I then took in the paddles, and permitted the skiff to glide before the wind. I took the precaution to place myself in such a manner that I was completely hidden, while through the branches I commanded a view of the surface on any side I might wish to look. The bushes acted as a sail, and I was soon drifted down among the plants of the wild celery. I feared that this might stay my progress, as the breeze was light, and might not carry me through. But the sward, contrary to what is usual, was thin at the place where the skiff had entered, and I felt, to my satisfaction, that I was moving, though slowly, in the right direction. I remember that the heat annoyed me at the time. It was the month of November; but it was that peculiar season known in America as 'Indian summer,' and the heat was excessive—not under 90 degrees, I am certain. The shrubbery that encircled me prevented a breath of air from reaching my body; and the rays of the noonday sun fell almost vertically in that southern latitude, scorching me as I lay along the bottom of the boat. Under other circumstances, I should not have liked to undergo such a roasting; but with the prospect of a splendid shot before me, I endured it as best I could.

The skiff was nearly an hour in pushing its way through the field of *vallisneria*, and once or twice it remained for a considerable time motionless. A stronger breeze, however, would spring up, and then the sound of the reeds rubbing the sides of the boat would gratefully admonish me that I was again moving ahead. I saw, at length, to my great gratification, that I was approaching the selvage of the sedge, and, moreover, that the flock itself was moving, as it were, to meet me! Many of the birds were diving and feeding in the direction of the skiff. I lay watching them with interest. I saw that the canvas-backs were accompanied by another species of a very different colour from themselves: this was the American widgeon. It was a curious sight to witness the constant warfare that was carried on between these two species of birds. The widgeon is a very poor diver, while the canvas-back is one of the very best. The widgeon, however, is equally fond of the roots of the wild celery with his congener; but he has no means of obtaining them except by robbing the latter. Being a smaller and less powerful bird, he is not able to do this openly; and it was curious to observe the means by which he effected his purpose. It was as follows: When the canvas-back descends, he must perforce remain some moments under water. It requires time to seize hold of the

plant, and pluck it up by the roots. In consequence of this, he usually reaches the surface in a state of half-blindness, holding the luscious morsel in his bill. The widgeon has observed him going down, and calculating to a nicety the spot where he will re-appear, seats himself in readiness. The moment the other emerges, and before he can fully recover his sight or his senses, the active spoliator makes a dash, seizes the celery in his horny mandibles, and makes off with it as fast as his webbed feet can propel him. The canvas-back, although chagrined at being plundered in this impudent manner, knows that pursuit would be idle, and, setting the root down as lost, draws a fresh breath, and dives for another. I noticed in the flock the continual occurrence of such scenes.

A third species of birds drew my attention: these were the pochards, or, as they are termed by the gunners of the Chesapeake, red-heads (*Fuligula erythrocephalus*). These creatures bear a very great resemblance to the canvas-backs, and can hardly be distinguished except by their bills: those of the former being concave along the upper surface, while the bills of the canvas-backs exhibit a nearly straight line. I saw that the pochards did not interfere with either of the other species, contenting themselves with feeding upon what neither of the others cared for—the green leaves of the *vallisneria*, which, after being stripped of their roots, were floating in quantities on the surface of the water. Yet these pochards are almost as much prized for the table as their cousins, the canvas-backs; and, indeed, they are often put off for the latter by the poulterers of New York and Philadelphia. Those who would buy a real canvas-back should know something of natural history. The form and colour of the bill would serve as a criterion to prevent their being deceived. In the pochard, the bill is of a bluish colour; that of the canvas-back is dark green: moreover, the eye of the pochard is yellow, while that of its congener is fiery red.

These thoughts were banished from my mind, on perceiving that I had at last drifted within range of a thick clump of the ducks. Nothing now remained but to poke my gun noiselessly through the bushes, set the cocks of both barrels, take aim, and fire. It was my intention to follow the usual plan—that is, fire one barrel at the birds while sitting, and give them the second as they rose upon the wing. This intention was carried out the moment after; and I had the gratification of seeing some fifteen or twenty ducks strewn over the water, at my service. The rest of the flock rose into the heavens, and the clapping of their wings filled the air with a noise that resembled thunder. I say that there appeared to have been fifteen or twenty killed; how many I never knew: I never laid my hands upon a single bird of them. I became differently occupied, and with a matter that soon drove canvas-backs, and widgeons, and pochards as clean out of my head as if no such creatures had ever existed.

While drifting through the sedge, my attention had several times been attracted by what appeared to be strange conduct on the part of my canine companion. He lay cowering in the bottom of the boat near the bow, and half covered by the bushes; but every now and then he would start to his feet, look wildly around, utter a strange whimpering, and then resume his crouching attitude. I noticed, moreover, that at intervals he trembled as if he was about to shake out his teeth. All this had caused me wonder—nothing more. I was too much occupied in watching the game, to speculate upon causes; I believed, if I formed any belief on the subject, that these manoeuvres were caused by fear; that the cur had never been to sea, and that he was now either sea-sick or sea-scared. This explanation had hitherto satisfied me, and I had thought no more upon the matter. I had scarcely delivered my second barrel, however, when my attention was anew

attracted to the dog; and this time was so arrested, that in one half-second I thought of nothing else. The animal had arisen, and stood within three feet of me, whining hideously. His eyes glared upon me with a wild and unnatural expression, his tongue lolled out, and saliva fell copiously from his lips. *The dog was mad!*

I saw that the dog was mad, as certainly as I saw the dog. I had seen mad dogs before, and knew the symptoms well. It was hydrophobia of the most dangerous character. Fear, quick and sudden, came over me. Fear is a tame word; horror, I should call it; and the phrase would not be too strong to express my sensations at that moment. I knew myself to be in a situation of extreme peril, and I saw not the way out of it. Death—death painful and horrid—appeared to be nigh, appeared to confront me, glaring from out the eyes of the hideous brute.

Instinct had caused me to put myself in an attitude of defence. My first instinct was a false one. I raised my gun, at the same moment manipulating the lock, with the design of cocking her. In the confusion of terror, I had even forgotten that both barrels were empty, that I had just scattered their contents in the sea. I thought of reloading; but a movement of the dog towards me shewed that that would be a dangerous experiment; and a third thought or instinct directed me to turn the piece in my hand, and defend myself, if necessary, with the butt. This instinct was instantly obeyed, and in a second's time I held the piece clubbed and ready to strike. I had retreated backward until I stood in the stern of the skiff. The dog had hitherto lain close up to the bow, but after the shots, he had sprung up and taken a position nearer the centre of the boat. In fact, he had been within biting distance of me before I had noticed his madness. The position, into which I had thus half involuntarily thrown myself, offered me but a trifling security.

Any one who has ever rowed an American skiff will remember that these little vessels are 'crank' to an extreme degree. Although boat-shaped above, they are without keels, and a rude step will turn them bottom upward in an instant. Even to stand upright in them, requires careful balancing; but to fight a mad dog in one without being bitten, would require the skill and adroitness of an acrobat. With all my caution, as I half stood, half crouched in the stern, the skiff rocked from side to side, and I was in danger of being pitched out. Should the dog spring at me, I knew that any violent exertion to fend him off would either cause me to be precipitated into the water or would upset the boat—a still more dreadful alternative. These thoughts did not occupy half the time I have taken to describe them. Short, however, as that time was in actual duration, to me it seemed long enough, for the dog still held a threatening attitude, his forepaws resting upon one of the seats, while his eyes continued to glare upon me with a wild and uncertain expression.

I remained for some moments in fearful suspense. I was half paralysed with terror, and uncertain what action it would be best to take. I feared that any movement would attract the fierce animal, and be the signal for him to spring upon me. I thought of jumping out of the skiff into the water. I could not wade in it. It was shallow enough—not over five feet in depth, but the bottom appeared to be of soft mud. I might sink another foot in the mud. No; I could not have waded. The idea was dismissed. To swim to the shore? I glanced sideways in that direction: it was nearly half a mile distant. I could never reach it, cumbered with my clothes. To have stripped these off, would have tempted the attack. Even could I have done so, might not the dog follow, and seize me in the water? A horrible thought!

I abandoned all hope of escape, at least that might arise from any active measures on my part. I could

do nothing to save myself; my only hope lay in passively awaiting the result. Impressed with this idea. I remained motionless as a statue; I moved neither hand nor foot from the attitude I had first assumed; I scarcely permitted myself to breathe, so much did I dread attracting the further attention of my terrible companion, and interrupting the neutrality that existed.

For some minutes—they seemed hours—this state of affairs continued. The dog still stood up, with his fore-paws raised upon the bench; the oars were among his feet. In this position he remained, gazing wildly, though it did not appear to me steadily, in my face. Several times I thought he was about to spring on me; and, although I carefully avoided making any movement, I instinctively grasped my gun with a firmer hold. To add to my embarrassment, I saw that I was fast drifting seaward! The wind was from the shore; it was impelling the boat with considerable velocity, in consequence of the mass of bushes acting as sails. Already it had cleared the sedge, and was floating out in open water. To my dismay, at less than a mile's distance, I descried a line of breakers! A side-glance was sufficient to convince me, that unless the skiff was checked, she would drift upon these in the space of ten minutes. A fearful alternative now presented itself: I must either drive the dog from the oars, or allow the skiff to be swamped among the breakers. The latter would be certain death, the former offered a chance for life; and, nerving myself with the palpable necessity for action, I instantly resolved to make the attack.

Whether the dog had read my intention in my eyes, or observed my fingers taking a firmer clutch of my gun, I know not, but at this moment he seemed to evince sudden fear, and, dropping down from the seat, he ran backward to the bow, and covered down as before. My first impulse was to get hold of the oars, for the roar of the breakers already filled my ears. A better idea suggested itself immediately after, and that was to load my gun. This was a delicate business, but I set about it with all the caution I could command. I kept my eyes fixed upon the animal, and felt the powder, the wadding, and the shot, into the muzzle. I succeeded in loading one barrel, and fixing the cap. As I had now something upon which I could rely, I proceeded with more confidence, and loaded the second barrel with greater care, the dog eyeing me all the while. Had madness not obscured his intelligence, he would no doubt have interrupted my manipulations; as it was, he remained still until both barrels were loaded, capped, and cocked. I had no time to spare; the breakers were nigh; their hoarse 'sough' warned me of their perilous proximity: a minute more, and the little skiff would be dancing among them like a shell, or sunk for ever. Not a moment was to be lost, and yet I had to proceed with caution. I dared not raise the gun to my shoulder—I dared not glance along the barrels: the manœuvre might rouse the dangerous brute. I held the piece low, slanting along my thighs, I guided the barrels with my mind, and, feeling the direction to be true, I fired. I scarcely heard the report, on account of the roaring of the sea; but I saw the dog roll over, kicking violently. I saw a livid patch over his ribs, where the shot had entered in a clump. This would no doubt have proved sufficient; but to make sure, I raised the gun to my shoulder, took aim, and sent the contents of the second barrel through the ribs of the miserable brute. His kicking ended almost instantly, and he lay dead in the bottom of the boat.

I dropped my gun and flew to the oars: it was a close shave; the skiff was already in white water, and dancing like a feather; but with a few strokes I succeeded in backing her out, and then heading her away from the breakers, I pulled in a direct line for the shore. I thought not of my canvas-backs—they had floated, by this time, I neither knew nor cared

whither: the sharks might have them for me. My only care was to get away from the scene as quickly as possible, determined never again to go duck-shooting with a cur for my companion.

A TOUCH AT THE TOUCHY.

I HAVE heard a great deal in my time, through book and pulpit, of offensive people—that is, people who, being of a rude or malicious disposition, frequently give offence to their neighbours and friends. It strikes me that the remarks thrown out upon such persons are in a great measure uncalled for and useless, for it so happens that I scarcely ever meet an offensive person. I believe there was a class of such people once, as there once were plesiosauri and anoplotheria; but if such a class are to be found in the present world at all, it must be in a grade of society I am little acquainted with. In my social sphere, the opposite error of an excessive complaisance is considerably more conspicuous.

If writers and preachers, however, were to direct a little of their thunder against offence-taking people, they would, I apprehend, be doing useful service. This is a class which has, I suspect, been increasing in numbers and sensitiveness, precisely as the offence-giving class has been diminishing—a discord with its co-relative which is only apparent, seeing that the peculiar property of this portion of the human race is always to be the most affected by the least cogent causes. In the days when there was a general roughness and want of mutual respect, there was, I suppose, hardly such a thing as taking offence at all. If there was rudeness on the one side, there was good-humour or thick-skinnedness on the other; and so sulking and firing-up were both of them hardly known. It was only when we all became such very nice ladies and gentlemen, as scarcely ever to utter a word out of joint, or fail in one of the formalities of society, that we began to be so much pestered with intimations that great offence had been taken at us for something which we had said or done, or something which we had failed to say or do.

In the beds of roses on which most of these people pass their days, a single crumpled leaf is enough to give pain. Bow to them in the street with only a little less than your usual flexure, fail to go up and converse with them in a crowded evening-party, and they go home full of resentment at the slight you have put upon them. Pass them over in the invitations you give out for a dinner or soirée where they would wish to be, and they begin to speak of you as a heartless person who forgets old friends. To be unmoved at one of their jokes, to give a wry look at the crying of one of their children, to fail to speak with sufficient warmth of their piano-playing, or their last novel or poem, is enough to discompose them effectually at the moment, and throw a cloud over their behaviour towards you for a long time to come, if not for ever. Much worse is it if they should have heard a report of some half-jocular remark you had made upon them, not quite respectful in its tendency. Then, without affording you any opportunity of explanation or apology, they seal a vow of eternal resentment against you, or, what is quite as bad, withdraw into a cold abstraction which it is vain for you to try to penetrate.

Confirmed offence-takers are so exceedingly disagreeable as acquaintances, that few care much for their society, or feel any great concern when they give symptoms of having taken umbrage. We pass them over as unfortunates, and quickly cease to think of them. It is chiefly in circles of relationship they become seriously annoying, for then they cannot be so readily dismissed from consideration. The mischief

they do in such circles by their exigent tempers, their reclamations against imaginary ill-usage, and their raising little cabals and factions against every one who fails to please them, is enormous. How often do we find that a course of consistent kindness, persevered in for years by one person in a family circle towards another, will become a blank in recollection the moment some trivial word or look has been taken amiss. It is from such causes the greater number of family quarrels spring. Bystanders usually affect impartiality in such cases, as being totally unable to say which party is in the wrong. I have no difficulty whatever in the case. Only tell me which party first complained of an offence, and I will tell you with whom, in all probability, the mischief originated.

If you analyse the character of a confirmed offence-taker, you will almost always find an inordinate self-love at the bottom of it. Such persons never get the attentions and consideration they think their due. They deem all around them to be in a conspiracy to use them ill, when they themselves are more truly in a conspiracy to torment society. The source of their infirmity is revealed by a converse fact—namely, their extraordinary liability to think favourably of all who will pay them court, not even excepting the most silly and the most worthless. It is equally demonstrated by another attendant circumstance—that they instinctively shrink from the friendship of all kinds of honest and manly people. In short, offence-takers, in general, are about the most contemptible people one meets with, as unfortunately they are also not far from being the most mischievous.

With the best feelings towards unfortunate and reduced people generally, and also towards those who are struggling upwards, but have not yet mounted very high, I am painfully sensible of there being a difficulty in keeping on good terms with them, in consequence of their great proneness to taking offence where none is meant. It requires a very nice diplomacy to get comfortably along with people who feel their fortunes to be below their merits and their pretensions. With easy well-off friends you can take some little liberty: you may call or not as you choose; you may indulge in jocular chat, partly at their expense, sure that they will take it all in good-humour. But there can be no such freedom with poor friends: there we can have no safety but in the rigour of etiquette, under whose deadly shade all social enjoyment fades and perishes. It is a sad consideration; but we all daily feel how fortune determines our associations and our friendships, and it is easy to see that this sensitiveness of the inferior towards the superior is one grand cause why it is so. One wearies of constant explanations for doing away with unintentional offence; we, in time, shrink with apprehension from persons whom we fear by every trivial word to throw into a paroxysm of resentment. The society of our peers becomes more convenient, and we at length are content to leave our unfortunate old friends to their own reflections.

There is such a thing, of course, as occasional offence-taking by worthy people, simply under mistaken views of what is due to them, or of what has been done towards them. I would speak of this with forbearance, as an error into which the most amiable humanity may fall; but I must also take leave to warn all my friends against it, as a very grievous and dangerous one which they may well take some pains to avoid. Many a well-meaning person must have had occasion to regret that he once gave way to a feeling of offence, and spoke and acted about it in a way that magnified a trifle into a serious evil. A regret of this kind may last a lifetime, though the original offence was but the feeling of a moment. Let such facts put us on our guard against everything like undue irritability or sensitiveness, or at least against giving way to resentment until we have been fully assured that offence was really meant,

and find that an opportunity for repentance has been neglected by the offender. And even then let the sense of irritation be restrained within the narrowest limits possible.

THINGS TALKED OF IN LONDON.

August 1853.

'J's m'ennuyais,' said the traveller, when asked what he did with himself during a rainy week at Potsdam; and multitudes of our metropolitan lieges say the same of the past few weeks, especially such as are of a migratory habit. People grow weary of the protracted session, and liken themselves to Mariana in the moated grange: the end of the present month will, however, find them all dispersed, the brief respite accorded to the grouse will be over, and London will be left to the sighing sympathies of a 'last man' or two, and the regrets of retail-dealers. The time was not altogether lost with our legislators, for they did some things, and talked about others. They recommended, for example, through a committee, that the decimal system should be adopted in our currency, the pound to be taken as the integer, divisible into 1000 fractions. A capital recommendation—one that does honour to the collective wisdom; and may it be speedily realised! They did something towards promoting education, with a side-glance at the removal of abuses in endowed schools, and they mean to try in earnest what can be done in the way of reforming juvenile offenders. Of these, the number under seventeen years of age brought before the bar of justice in one year is 13,000, all recruits for the great army of crime, unless prompt and effectual means can be taken to direct their ingenuity into worthy courses. What these means shall be, will perhaps be decided next session; meanwhile the *Times* pithily remarks, that a great outlay for expensive buildings need form no part of them. 'Truly, our children ask,' says the writer, 'if not for bread, for that which is better than bread, and we give them bricks and mortar;' and he adds, that great care should be taken not to make the condition of the culprit, during the reformatory process, preferable to that of the honest and hard-working labourer outside. If these things are really to be carried into effect, no one will regret that they stand over till next session, for in such measures there ought to be no mistake.

All who can are taking holidays: the Archaeological Association and Institute have been eating lunches and dinners, and studying antiquities in Kent and Sussex. Some of our most distinguished men of science have crossed the Channel to compare notes with the savants of Paris; and others, with knapsack on shoulder, are wandering about Switzerland, invigorating themselves for new studies. Now and then a whisper is heard, that we shall surely hear something of Sir John Franklin before winter comes again: Dr Vogel writes from Tripoli, that he is on his way to meet Dr Barth, and to cross Africa to the Indian Ocean; and there is talk of another exploration of the interior of North Australia. Some of our learned men are now inclined to believe, that the great desert said to exist in the interior of that great country is only imaginary. The officials of the British Association are hard at work preparing for the meeting which is to take place at Hull early in September; and it is believed that meteorological science will have a word to say for itself, especially as a meteorological congress is to be held at Brussels during the present month. Government is not allowed to forget its promise of a great oceanic survey in conjunction with the United States; the ships of Sweden are now to take part in it; and besides this, if the Treasury will not be miserly, it is to be called on to find funds for the establishment of a large reflecting telescope in the southern hemisphere.

An experiment has been made by some merchants at Grimsby, to try whether quick returns can be accomplished in the China trade. They built a new clipper-ship, *Spirit of the North*, loaded her with great celerity by means of the hydraulic machinery in their well-appointed docks, and started her for Shanghai, which port she is to reach in three months, or as much less as her sailing qualities and her captain's skill may determine. If experience is to suggest, as doubtless it will, further improvements in ships, we shall soon make the voyage to China in two months; and, perhaps, the much-talked-of race round the world between a couple of clippers, will furnish data that may be taken advantage of by enterprising ship-builders. There is an opening now for a direct trade with the inland seas of America, for the *Cherokee*, a ship built on Lake Ontario, has arrived at Liverpool without any shifting of cargo; and the Canadians may congratulate themselves on having at length successfully overcome the obstacles to navigation between the Gulf of St Lawrence and their great lakes.

A Yankee at Boston has been trying experiments on the rapid transmission of small parcels, by blowing them through a tube, in the same way as it was once proposed to despatch passengers from London to Brighton. On a small scale, the project answers very well; but whether the projector will be able to lay on a delivery-pipe to the chief mercantile establishments of the city, and work the dispatches without confusion, remains to be proved. Not less so the French experiment of sending two messages at once along the same wire—it will be a triumph of ingenuity if the respective individualities can indeed be preserved.

Balloon-ships are again talked about: Mr Poesche of Philadelphia says, that now we are about to encircle the whole earth with telegraph wires, 'aerial navigation becomes a logical necessity.' He proposes to build a flat-bottomed boat, long and narrow, on low wheels, and with a screw-propeller, which being made to rotate, the wheels are set in motion, and the vessel moves over the ground. 'For the purpose of ascension,' we are told, 'the ship is furnished at its sides with large inclined planes of double-glued canvas, stretched upon iron frames, which act like the plane of a boy's kite. These planes turn upon iron axes, which are adjusted under the heavy beam of the deck: let them be fixed at an angle of 45 degrees, and the vessel be propelled rapidly by means of the screw, and the air, compressed by their resistance, will lift the ship.' Mr Poesche makes his views public, in order that they may be canvassed, as no doubt they will, by those who are expert enough to see the fallacy of his reasonings. 'My ship,' he concludes, 'most nearly resembles the flying-fish, which progresses by means of the spiral action of the tail, while its extended fins support it for a time in the air.'

Our engineers are finding something to say about the tunnel under the Alps, which, if it can be made, is to connect the Piedmontese railways with those of France, passing right through the mountains from Susa and Bardoneche to Modana in Savoy, by a line ten miles shorter than over Mont Cenis. The tunnel is to be eight miles in length, and a mile below the surface of the pass; the estimated cost a million and a half sterling. Chevalier Maus, the engineer, has contrived an excavating machine, which, by the backward and forward motion of a number of large chisels, makes deep grooves in the rock, and the masses are then split off by means of wedges. The machine strikes 150 blows in a minute, while small jets of water play between the chisels to diminish the friction and lay the dust. As the depth will be too great for the sinking of shafts, the tunnel is to be ventilated by a tube lying on the ground, carried in as the work advances, and provided with fans to maintain a sufficient current of air. The chevalier hopes to have the mountain pierced in five years, and then the barrier which separates

Piedmont from her neighbours will be virtually removed; but lovers of the picturesque will still prefer to travel over the mountain rather than under it.

The French government is about to establish a system of meteorological observations throughout Algeria, with a view to ascertain the real nature of the climate of that country, as efforts are being made to grow sugar-cane, indigo, and cotton. These efforts are perhaps prompted by the ambition to shew that France can colonise successfully as well as other countries; at all events, there will accrue some data, of which science will not fail to take good heed. Apropos of Algeria, it is a noteworthy fact, that 20,000 Spaniards have recently emigrated to that country from the barren and ugly province of Murcia; and here we have another commingling of populations, which, at some future day, will sorely tax the ingenuity of ethnologists to account for. What if the Moors should take a fancy to revisit Spain, and try whether the keys of the cities once held by them, which they religiously keep, still fit the locks! It would be something quite new in the annals of emigration.

The Royal Academy of Sciences at Amsterdam offers a prize of 600 florins for the best memoir containing 'a succinct, complete, and critical exposition of the discoveries made in the alternation of generation of invertebrate animals,' to be illustrated with drawings from nature. A choice of five languages is given in which it may be written, one of them English; and it is to be delivered by the end of March 1855. The subject is highly interesting, and one on which British naturalists have something to say, for their labours have of late thrown much additional light upon it. To explain it to our readers in a word—it is a peculiarity of reproduction in such low animals as the sea-anemone or jelly, by which the second generation is a different creature from the first, which, however, reappears in the third, and so on. The Académie at Paris, too, is publishing a list of subjects for prizes, and is about to adjudicate on the papers which have been sent in for the present year. Something very good and important is expected in the department of medicine and surgery. Among the matters that have lately come before that learned body are: an improved method of inoculation, for preserving cattle from certain diseases; an apparatus 'for obtaining directly from new milk all the butter it contains'; an announcement that the quantity of iodine in the Seine is greatest in winter—whence is inferred the law, that iodine increases as temperature decreases, a noteworthy fact for those who are studying the action of this mineral on goitre and other diseases. M. Bouniceau reports, that he has succeeded in making leeches breed at the end of the second year, instead of the eighth or tenth, as at present; and he considers that this discovery opens the way for a large and profitable branch of industry in the rearing of these useful animals. M. Poggioli shews that sciatica may be rapidly cured by a compound medicine, applied externally, relief being generally complete after a few daily-repeated frictions. Singularly enough, the ingredients must be mixed before they are used; if rubbed in separately, no beneficial effect is produced: the subject is to be investigated by a commission. Much pains are being taken with the 'education' of silk-worms at the different sericultural establishments in France, as it is found that only by the exercise of the most scrupulous care can a good breed be kept up. None but the best cocoons are to be selected, and non-acclimated eggs are to be destroyed. Some experiments have been made as to the possibility of colouring the silk, and with partial success: worms fed on leaves strewn with indigo produced blue cocoons, and the powder of chica gives a rose-colour. Persoz, the celebrated chemist, states that a specimen of calico from China having fallen into his hands, he was led to examine the nature of the dye, after which he wrote to the American consul at Canton

for a small quantity of the substance employed. It proves to be a species of lac, resembling indigo in general appearance, but containing none of that substance in any of its forms. The dye is a beautiful green, and is considered of such value that the Chamber of Commerce at Paris have sent to China for a quantity of the article, to test its value by multiplied experiments.

M. Chevreul has sent in a memoir which may prove suggestive to those who busy themselves with the science of sanitation: it is 'on certain chemical reactions which affect the health of populous cities,' and calls attention to the necessity for preventing the accumulation of effete matters in the soil. Everything should be done to promote the descent of oxygen, and thereby insure the combustion of the noxious particles; and this is best insured by frequent washing with water, and the digging of deep drain-wells. M. Chevreul takes up five or six leading points, and discusses them carefully; he attaches primary importance to the abundant distribution of water, and the method of paving. He has examined the black dirt which is found immediately below the paving-stones in Paris, as in London and all large towns, and finds it to be a ferruginous matter, which absorbs at once the oxygen of the air before it can penetrate to a lower depth; hence it is only by really good drainage that an atmospheric current through the upper layers of the soil can become possible. Under these circumstances, it is a satisfaction to know that the great London Drainage Company has again been mentioned in parliament, and it is to be hoped with something more than talk as the upshot. Besides being a 'ferruginous matter,' our black mud is so largely impregnated with gas, that the atmosphere is poisoned for many yards round every time an opening is made in the roadways.

A striking fact for chemists has been brought to light by the researches of M. Alvaro Reynoso, a Spanish experimentalist of some celebrity: it is the important part played by water under certain circumstances in chemical combinations. His experiments are rather dangerous in their nature, the substances on which he operates being placed in glass tubes, inside closed gun-barrels, and heated to 280 or 300 degrees in an oil-bath. In these conditions the water becomes an energetic chemical base, and quinoline is converted into quinoline, as completely as when the experiment is performed with potash. Certain monobasic phosphates change into tribasic, and some cases have presented themselves in which the water has proved far more energetic than the mineral bases themselves. It is said that we have herein a proof of the metallic quality of hydrogen; at all events, these experiments appear to promise an explanation of much that is at present obscure in the physical constitution of the crust of our globe.

A POOR CRETER.

'Long time ago,' in New England, dwelt a lady equally renowned for piety, credulity, and courage. As she was in the habit of returning from meeting unattended, some wild fellows formed a project for frightening her, and furnishing themselves with a little pleasant amusement. One arrayed in black, crowned with a pair of horns, and armed with a pitchfork, placed himself behind a tree and awaited her coming. His companions were concealed at hand to watch the mischief, and participate in the fun. At last came the unsuspecting victim leisurely along—meditating, no doubt, on the discourse to which she had been listening. Out sprang his satanic majesty *pro tem.*, and confronted her. 'Why, who be you?' she exclaimed. 'I'm the devil!' exclaimed the rogue in a hollow voice. 'Well,' said she, in a pitying tone—not doubting, mind you, the gentleman's word—'you're a poor creter!' and quietly went her way. We call that true courage, or perhaps more properly true faith. 'With a conscience void of offence,' she knew that she had nothing to fear; that she was, in truth, a mate for his betters.—*American Courier.*

MEMORIES.

BY MARIE J. EWEN.

A CRIMSON sunset's memory,
When streams of glory rolled
Between the cloud-piled mountain-snows,
In purple and in gold.

A memory of the ancient sea
When I heard the wild waves' fall;
As the 'moon above rose solemnly,'
And the night was over all.

A memory of an antique room,
And banners in the air;
And pictures quaint, and shadows strange,
Of times heroic there.

A quiet walk one vernal eve,
Beneath the aspen trees,
With their wailing voice, that made me grieve
O'er thoughts of world-deep mysteries.

An hour alone, spent silently
In the dim church, about the fall
Of vesper shades—this memory
I love the best of all!

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